

## VEHICLE TECHNOLOGIES PROGRAM

# Ford Escape Advanced Research Fleet

Number of vehicles: 21 Date range of data received: 11/01/2009 to 10/31/2012

Reporting period: November 09 - Number of vehicle days driven: 10,119

October 12

#### All Trips Combined

Overall gasoline fuel economy (mpg)	38
Overall AC electrical energy consumption (AC Wh/mi) <sup>1</sup>	101
Overall DC electrical energy consumption (DC Wh/mi) <sup>2</sup>	69
Total number of trips	48,648
Total distance traveled (mi)	580,392

## Trips in Charge Depleting (CD) mode<sup>3</sup>

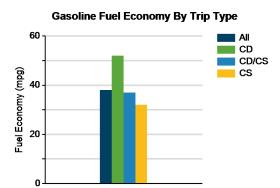
Gasoline fuel economy (mpg)	52
DC electrical energy consumption (DC Wh/mi) <sup>4</sup>	162
Number of trips	28,421
Percent of trips city   highway	83%   17%
Distance traveled (mi)	168,661
Percent of total distance traveled	29%

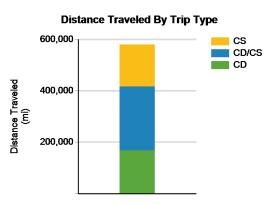
## Trips in both Charge Depleting & Charge Sustaining (CD/CS) modes<sup>5</sup>

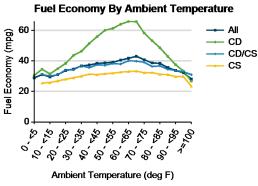
Gasoline fuel economy (mpg)	37
DC electrical energy consumption (DC Wh/mi) <sup>6</sup>	54
Number of trips	9,137
Percent of trips city   highway	38%   63%
Distance traveled (mi)	248,610
Percent of total distance traveled	43%

#### Trips in Charge Sustaining (CS) mode7

Gasoline fuel economy (mpg)	32
Number of trips	11,080
Percent of trips city   highway	66%   34%
Distance traveled (mi)	163,120
Percent of total distance traveled	28%







Notes: 1 - 7. Please see http://avt.inl.gov/pdf/phev/fordreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

Since these vehicles are flex-fuel capable, some driving events are conducted with E-85, which may decrease fuel economy results

"The Ford Escape Advanced Research Fleet was designed as a demonstration of customer duty cycles related to plug-in electric vehicles. The vehicles used in this demonstration have not been optimized to provide the maximum potential fuel economy."

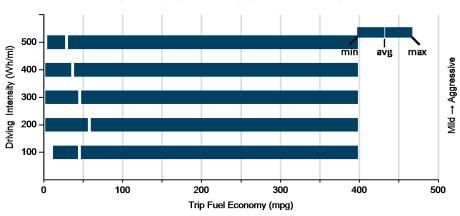


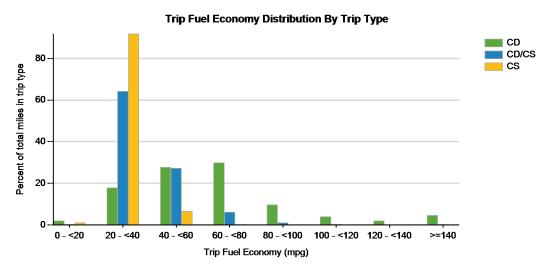
Average trip distance (mi)

Trips in Charge Depleting (CD) mode	City	Highway
Gasoline fuel economy (mpg)	48	58
DC electrical energy consumption (DC Wh/mi)	159	165
Percent of miles with internal combustion engine off	36%	11%
Average trip driving intensity (Wh/mi)	275	313
Average trip distance (mi)	4	18
Trips in Charge Depleting and Charge Sustaining (CD/CS) mode	)	
Gasoline fuel economy (mpg)	42	37
DC electrical energy consumption (DC Wh/mi)	73	51
Percent of miles with internal combustion engine off	29%	5%
Average trip driving intensity (Wh/mi)	283	330
Average trip distance (mi)	9	38
Trips in Charge Sustaining (CS) mode		
Gasoline fuel economy (mpg)	30	32
Percent of miles with internal combustion engine off	23%	4%
Average trip driving intensity (Wh/mi)	273	326

36

#### Effect Of Driving Intensity (Wheel Energy) on Fuel Economy This Month



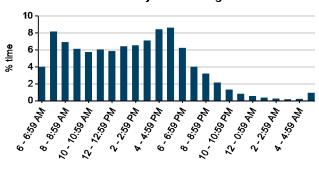




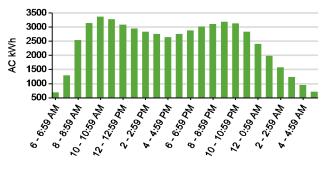
# Plug-in charging

Average number of charging events per vehicle per month when driven	28	
Average number of charging events per vehicle per day when driven	1.9	
Average distance driven between charging events (mi)	30.4	
Average number of trips between charging events	2.5	
Average time plugged in per charging event (hr)	7.4	
Average time charging per charging event (hr)	2.2	
Average energy per charging event (AC kWh)	3.0	
Average charging energy per vehicle per month (AC kWh)	85.2	
Total number of charging events	19,115	
Total charging energy (AC kWh)	58,440	

#### **Time of Day When Driving**



# **Time of Day When Charging**



# Time of Day When Plugging In

